



# Pharmacist Managed Asthma Clinics (PMAcS) in Montana

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# The Original PMAC

- Started an asthma clinic in 2006 at Partnership Health Center (Community Health Center)
  - Services offered: Asthma education, inhaler technique, peak flow monitoring, spirometry, referral for MAP
  - Collaborative Practice Agreement for medications related to allergies, asthma, and GERD
- Results over 18 months (2006-2008)
  - 37/121 (31%) returned for f/u visit
  - 33/37 (89%) had improvement based on ACT or symptoms
  - 29/37 (78%) had improved medication compliance and improved inhaler technique

# Expanding sites

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- 2008 - Joined Montana Asthma Advisory Group: Included pharmacists as key stakeholders
- Partnered with MACP to provide asthma education in various pharmacy settings
- Data collection done using Asthma Care Management System (ACMS), quarterly report turned in to MACP with de-identified information

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## ACMS DATA ENTRY

Patient Cool, Joe

Patient ID 65497589

Age 59 years

Select

Office Visit

Demographics

Most Recent Assess

Choose Specific Office Visit

Date 02/25/10

Reason Acute attack

Current Symptoms

Height 70 in

Weight

Immunizations Flu: Rec'd No

Date

Pneumo: Rec'd

Date

ACT Score

Spirometry &amp; PF

FEV1

% Predicted

62

FEV1/FVC %

Peak Flow

16

Asthma Control

Level of control: Not Well Controlled

Symptoms &gt; 2 days/wk

Nighttime Awakenings

SABA Use (not exercise related)

Interference w/normal activity Some limitation

PF/FEV1 % 60 - 80%

FEV1/FVC%

ACT Score

Exacerbations requiring oral steroids

Severity Persistent

Treatment

Step 3

Other Key Clinical Indicators

# of ER/Urgent Care/hospitalizations since last visit

# School/work days missed

Smoking

Yes

ETS Exposure in home

Triggers

Animals

Pollens/seasonal

Mold

Tobacco smoke

Exercise/sports

Comorbidities

Sinusitis/rhinitis

Stress/Depression

Obesity

OSA

GERD

Referrals

Pulmonary/allergy

Date (yyyy)

Smoking Cessation

Education

Adherence to medication

Inhaler technique

Environmental control

Medications

Short acting beta agonist

Inhaled corticosteroid - Low Dose

Inhaled corticosteroid - Medium Dose

Notes

View all notes for

# Year 1 (2010)

- UM School of Pharmacy partnered with MACP to establish PMACs in different pharmacy settings
- Five participating pharmacists were trained and became Certified Asthma Educators (AE-C)
- Partnership Community Health Center, Curry Student Health Center, Target Pharmacy, Family Pharmacy
- Initial outreach was made to patients, local providers, and employee groups for increased enrollment

# Year 2 (2011)

- Additional pharmacists trained at 3 new sites
  - 2 sites abandon due to time constraints
- Pilot with SOM to provide beneficiaries with asthma comprehensive asthma education in Missoula area
  - Up to 3 visits w/ peak flow meter & spacer
  - State reduced copays on asthma controller medications by 1 tier
    - ICS, LABA, LTRA
    - Example – ICS from Tier C (\$40/month) to Tier B (\$15/month)

# Year 3 (2012)

- SOM pilot expanded to Helena area
- Letter sent to ~1,500 beneficiaries who had received asthma related prescription in previous 12 months
  - 589 had asthma diagnosis
  - 40 patients enrolled in program
- Continued reductions for controller medications
  - Nasal corticosteroids added



# PMAC Services

- **Services/Information provided at PMACs**
  - Education regarding disease etiology/pathophysiology & environmental triggers
  - Medication counseling & explanation of treatment outcomes
  - Inhaler device training & practice using In-check Dial
  - Peak Flow Meter & Valved Holding Chamber instruction/demonstration
  - Simple spirometry & FEV<sub>1</sub> monitoring
  - Smoking cessation counseling and support
  - Written Asthma Action Plan
  - Assessment of control (Asthma Control Test administered) and recommendations for changes in therapy
  - Coordination of care with PCP, school nurses, social workers, etc.



# PMAC Goals

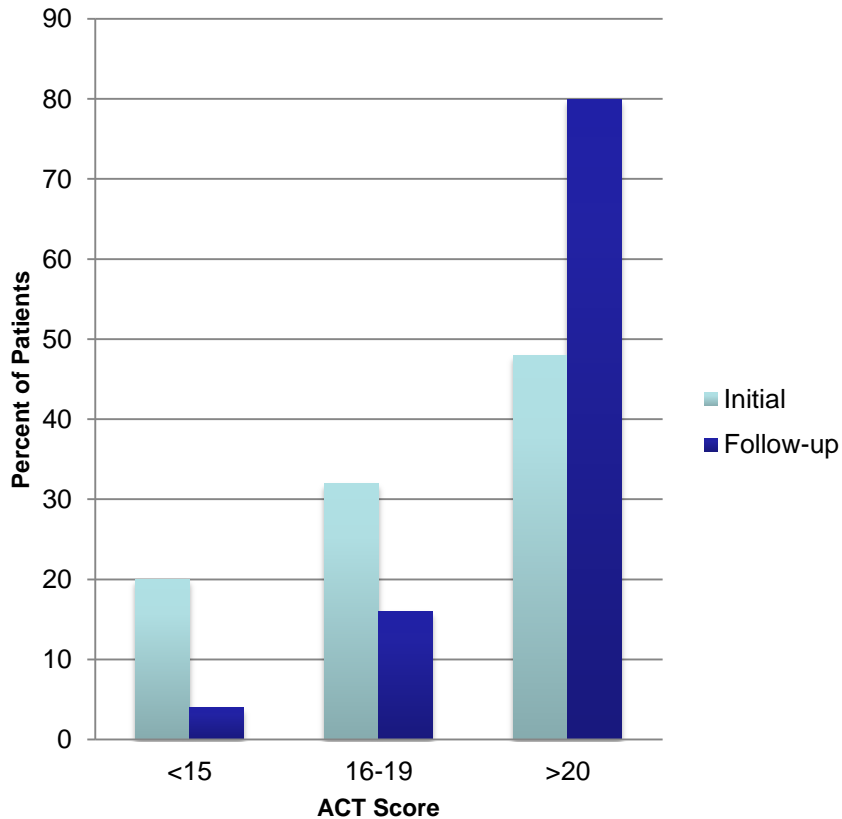
- Improve the level of control and QOL for those with asthma
- Educate, assess, treat, & monitor patients with asthma based on the NAEPP guidelines
- Determine the feasibility and value of PMACs
- Develop and improve PMAC sites while expanding to new sites
  - Train additional pharmacists as AE-C
- Strengthen partnership with SOM
  - Gain PMAC referrals
  - Gather economic outcomes to encourage reimbursement of pharmacist based asthma services

# Number of Patients Seen at Various PMAC sites

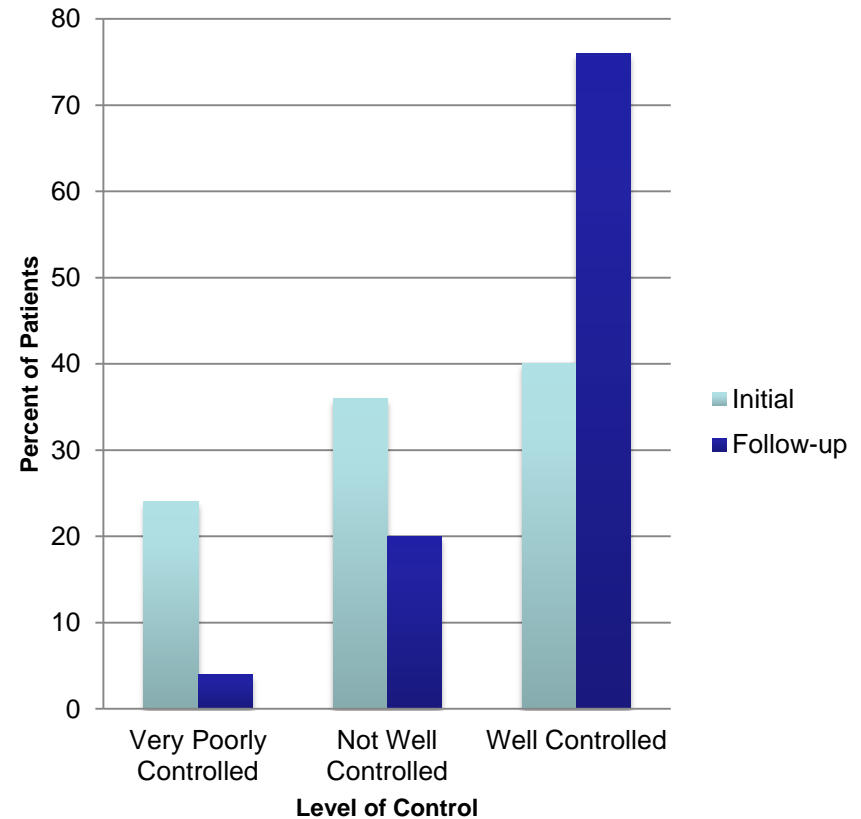
Asthma Clinic Site	Location	Total # of Patients Enrolled	# of follow up Visits
Partnership Community Health Center	Missoula, MT	140	30
State of Montana	Helena, MT	35	25
Florence Pharmacy	Florence, MT	28	0
Community Medical Center	Missoula, MT	6	2
Family Pharmacy	Stevensville, MT	19	3
Curry Student Health Service	Missoula, MT	6	No longer participating
Target Pharmacy	Missoula, MT	8	No longer participating

# State of Montana Patients

**ACT Score at Baseline & Follow-up  
(n=25)**

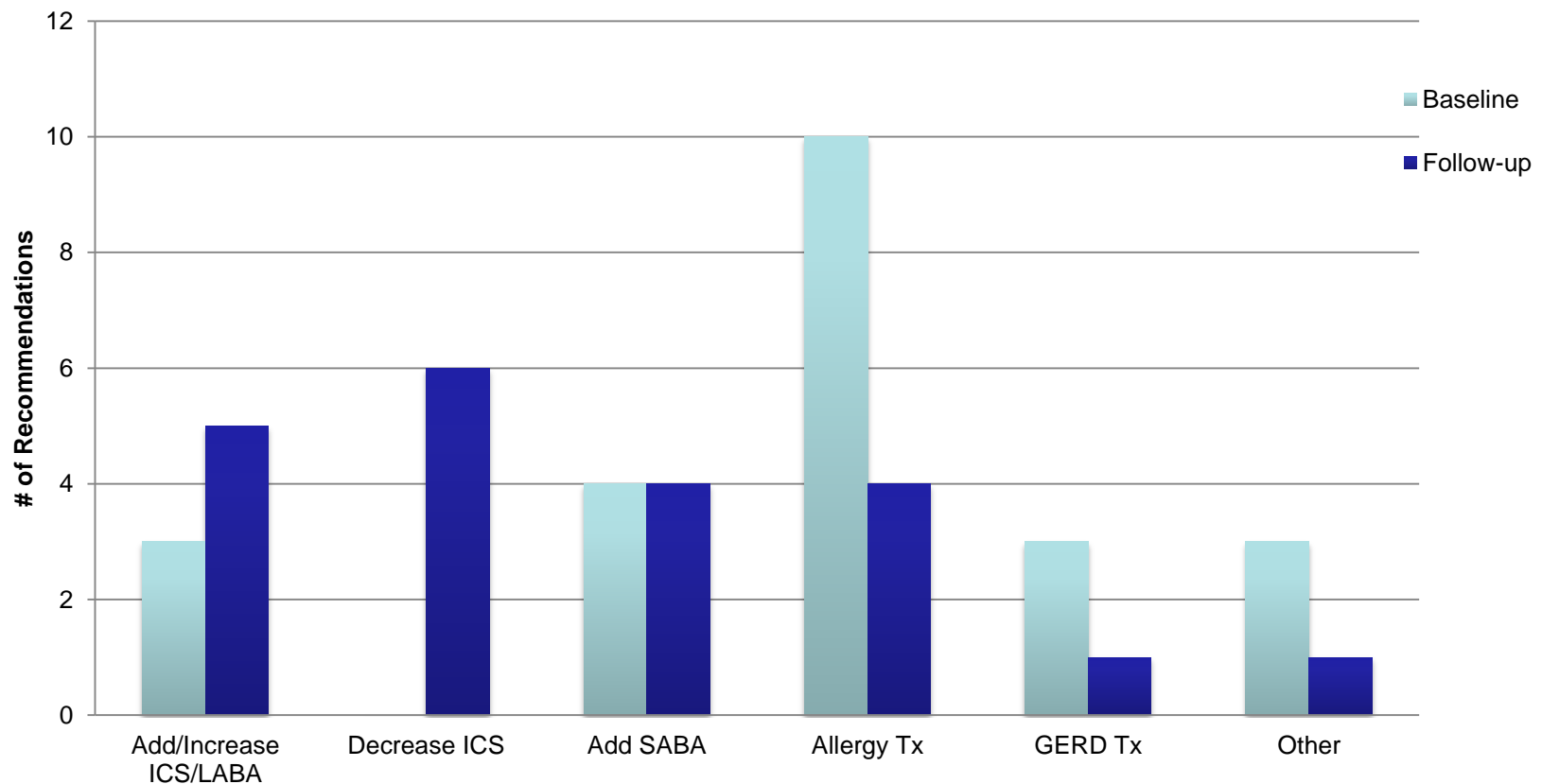


**Level of Control at Baseline and  
Follow-up (n=25)**



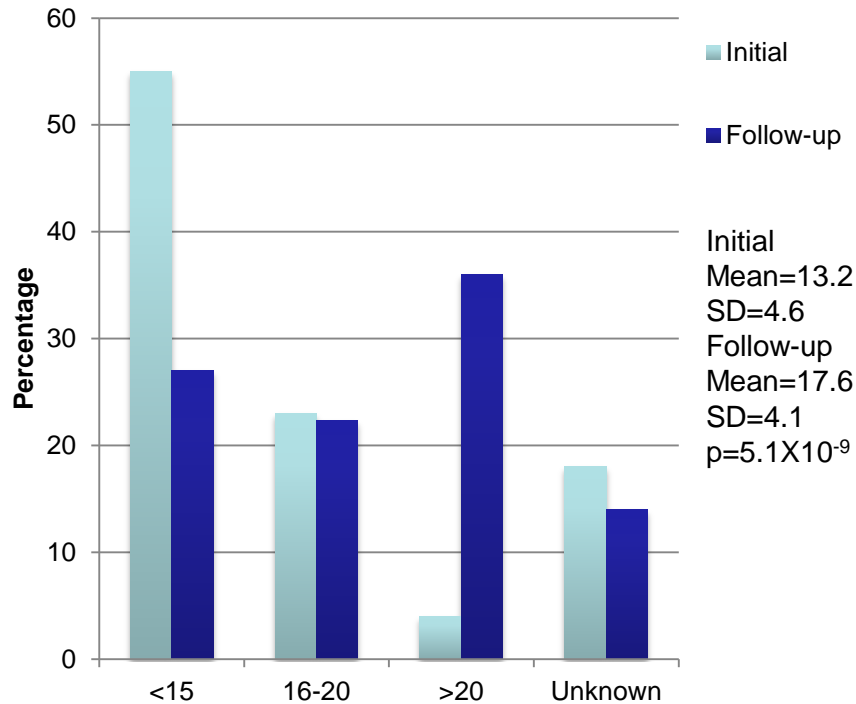
# State of Montana Patients

**Recommended Medication Changes at Baseline and Follow-up**

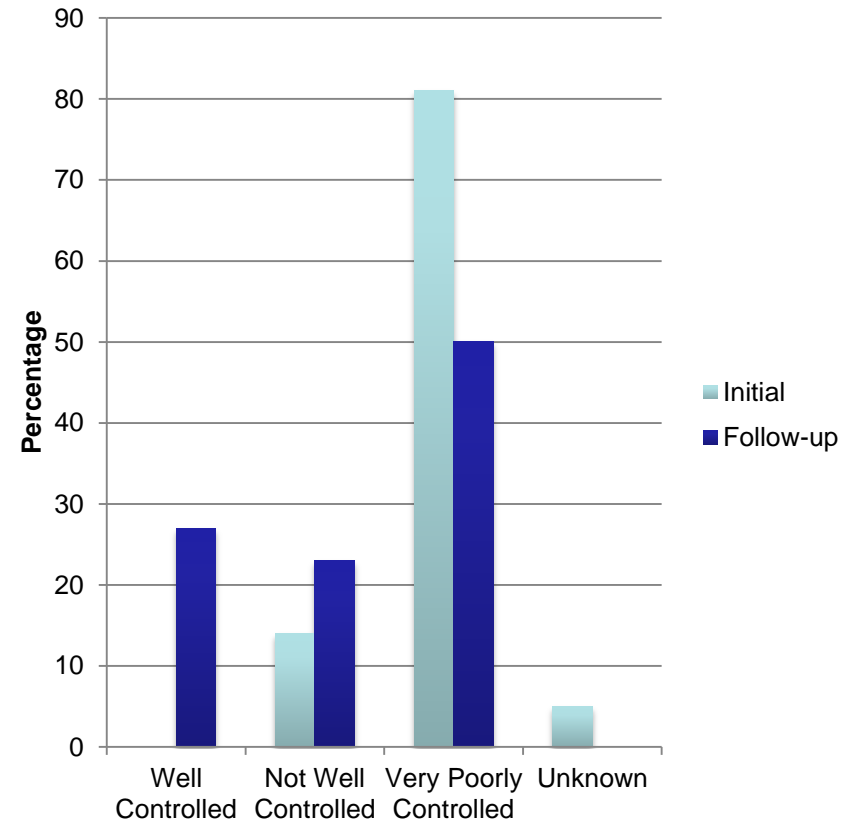


# Partnership Health Center Patients

## ACT baseline and follow-up (n=22)

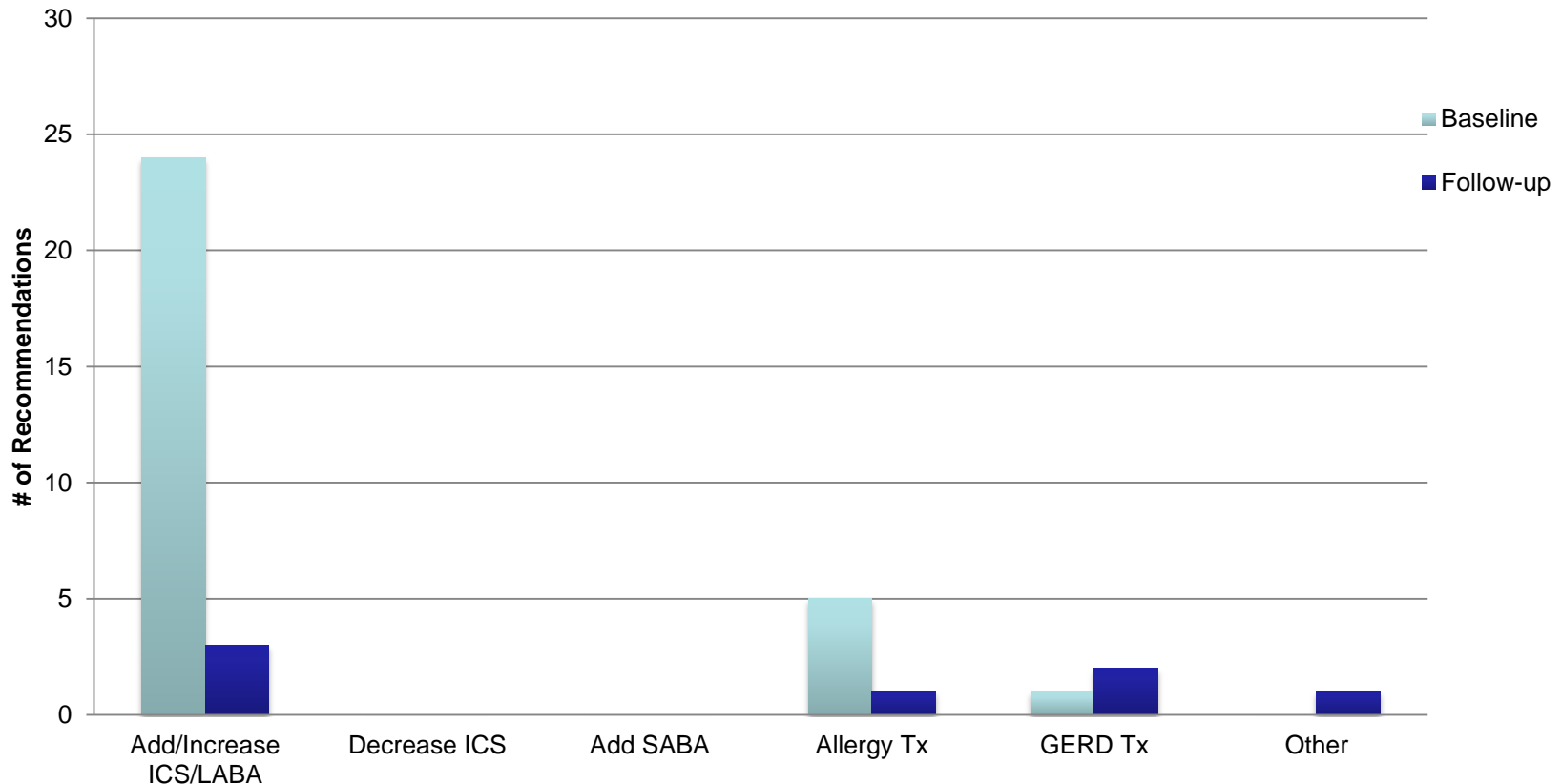


## Level of Control baseline and follow-up (n=22)



# Partnership Health Center Patients

## Recommended Medication Changes at Baseline and Follow-up



# Conclusions

- The majority of patients initially seen at the PMACs have asthma that is less than optimally controlled; however, patients enrolled in PMACs have demonstrated improved asthma control, as measured by ACT scores & improvement in symptoms.
- PMACs often recommend medication changes to PCP in attempt to optimize patients' asthma control. It is difficult to determine if recommendations are adopted at some sites due to limited access to patients' medical records.



# PMAC Future?

- PMACs are currently working with SOM to analyze claims data for the patients seen in our clinics.
  - Refill History for SABA vs. ICS
  - Pneumonia & Influenza vaccination status
  - Asthma related ER, Urgent Care, PCP, and Specialist visits
  - Days of work missed
  - Spirometry Results
  - Changes in Medical & Rx risk scores
  - Total Asthma Related Costs (Plan vs. Member)
- Develop a PMAC in the newly established State of Montana Employee Health Clinic.
  - Primary care to all State employees/beneficiaries at no charge.

# Questions?

